

REMARKS

In view of the above amendments and the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. Claims 30-32 have been amended as shown above. No claims have been
 5 added or cancelled. Claims 30-39 are pending.

Rejections to the Claims**35 U.S.C. 112**

Claims 35-38 are rejected under 35 U.S.C. §112, second paragraph, as
 10 being indefinite for failing to particularly point out and distinctly claim the subject matter in which applicant regards as the invention. The Office contends that the "range of [0,1] is not clearly stated, and asks the questions: "What are the units of the range of [0,1]? Does the range include only zero and one, does the range include the values between zero and one, does the range include values
 15 less than zero and one and greater than zero and one?" (*Office Action, pages 3-4.*)

Applicant respectfully traverses this rejection. The mathematical notation [0,1] is well-know to those skilled in the art to indicate an interval of real numbers between, and including, 0 and 1. In other words, a real number x is
 20 included in the interval [0,1] if $0 \leq x \leq 1$. This type of interval is also referred to as a closed interval. A similar notation (0,1) is used to indicate an interval of real numbers between, but not including, 0 and 1. This type of interval is also referred to as an open interval.

35 U.S.C. 102(e)

Claims 30-32, and 39 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication Number 2003/0174882 by Turpin et al (herein referred to as "Turpin").

5 Applicant describes a system in which a color selected in an authoring environment for display in a destination media environment is validated. Component values of a selected color are normalized; the normalized component values are converted to component values corresponding to a reference color space; and the component values corresponding to the
10 reference color space are then converted to component values corresponding to a color space of the destination media environment. If the component values corresponding to the color space of the destination media environment are within an acceptable range of values, then the selected color is validated. (*Summary*, paragraph [0006].)

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Specifically, claim 30 recites a computer-accessible medium having one or more instructions that are executable by one or more processors, the one or more instructions causing the one or more processors to:

20 detect a color selected from a graphic user interface (GUI)
color palette associated with an authoring environment;
normalize component values of the selected color in
accordance with a number of bits-per-channel associated with the
authoring environment;

convert the normalized component values to corresponding component values in a standardized reference color coordinate system; and

5 convert the component values in the standardized reference color coordinate system to corresponding component values in a receiver color coordinate system.

Turpin describes a color specification system that enables a consumer to select a desired color for a colorable product such as paint, grout, cement, etc. 10 (*Turpin*, paragraph [0008].) The color specification system receives a color selection from a user, and outputs a color code. (*Turpin*, paragraph [0077].) Turpin further describes a formulation system that may be used by a product provider. The formulation system receives the color code as input, and outputs a real-word volumetric or by-weight formula for making a specified colorable 15 product having the color specified by the color code. (*Turpin*, paragraph [0142].) Turpin describes converting a color selected by a user to a color code that can be used to generate a physical product colorization formula, but does not describe normalizing component values of the selected color in accordance with a number of bits-per-channel.

20 Turpin does not describe instructions that cause a processor to "normalize component values of the selected color in accordance with a number of bits-per-channel associated with the authoring environment," as recited in claim 30. The Office cites Turpin, Figure 18b and paragraph [0131] as

describing this claimed element. Applicant respectfully disagrees. Rather, Turpin describes receiving color information selected from an RGB or other color space, and converting the inputted color information relative to LUV color space. (*Turpin*, paragraph [0129].) Each of the L, U, and V color space values
5 are then normalized by adding +238 to such values. Each L, U, and V value is then separated into an integer component and a decimal component. The decimal components are then rounded to a desired precision. Each of the exponent and decimal components are then converted to binary strings. The L value integer, the L value decimal, the U value integer, the U value decimal, the
10 V value integer, and the V value decimal are each then converted to a 10-bit binary representation and concatenated into a 60-bit array. (*Turpin*, paragraph [0131].)

The process described in Turpin is applied to values that have already been converted from an original color space. Furthermore, Turpin does not
15 describe a normalizing process that is based on a number of bits-per-channel associated with the authoring environment. Accordingly, while Turpin may describe a normalizing process, Turpin does not describe instructions that cause a processor to "normalize component values of the selected color in accordance with a number of bits-per-channel associated with the authoring
20 environment," as recited in claim 30.

Accordingly, claim 30 is allowable over Turpin, and the 35 U.S.C. §102(e) rejection should be withdrawn.

Claims 31, 32, and 39 are allowable at least by virtue of their dependence on claim 30.

35 U.S.C. 103(a)

5 Claims 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turpin in view of United States Statutory Invention Registration, Reg. No. H1506 to Beretta (herein referred to as "Beretta").

As described above, Turpin describes a color specification system that enables a consumer to select a desired color for a colorable product such as paint, grout, cement, etc. (*Turpin*, paragraph [0008].) The color specification system receives a color selection from a user, and outputs a color code. (*Turpin*, paragraph [0077].) Turpin further describes a formulation system that may be used by a product provider. The formulation system receives the color code as input, and outputs a real-word volumetric or by-weight formula for making a specified colorable product having the color specified by the color code. (*Turpin*, paragraph [0142].)

Beretta teaches a color editing graphical user interface that enables a user to modify a palette of available colors. When a user edits a color, a gamut clipping process ensures that the modified color is producible in the display gamut. (*Beretta*, Abstract.) Beretta teaches presenting a palette of colors and enabling a user to edit the palette of colors, and does not teach gamma correction of a selected color. Furthermore, Beretta does not teach calculating a minimum average component value, defaulting to a next-closest color

component, nor indicating that a selected color is invalid if a component value falls outside of the range [0,1].

Claim 33 recites a computer-accessible medium according to Claim 30,
5 wherein to normalize the component values of the detected color is to gamma-correct the component values.

The combination of Turpin and Beretta does not teach or suggest instructions that cause a processor to “normalize component values of the
10 selected color in accordance with a number of bits-per-channel associated with the authoring environment,” as recited in claim 30; “wherein to normalize the component values of the detected color is to gamma-correct the component values,” as recited in claim 33.

The Office points to Beretta, Figure 20, element 218 and Beretta, column
15 34, lines 7-14 as teaching gamma-correction of the component values. Applicant respectfully disagrees. Rather, Beretta, Figure 20, element 218 reads “Find and Store Gamma Correction Factor.” Similarly, Beretta, column 34, lines 7-14 state, “the selected data structure is read to find an identified gamma correction factor for the RGB voltage values, and if this factor is found, it is
20 retrieved and stored in the StateRec record field called state.palettes[s].gamma.” Both of the cited portions of Beretta describe finding and storing a gamma correction factor, but neither of these cited portions of

Beretta teach using the identified gamma correction factor to gamma-correct component values of the detected color, as claimed.

Accordingly, for these reasons, and by virtue of its dependence on claim 30, claim 33 is allowable over Turpin in view of Beretta, and the 35 U.S.C. 103(a) rejection should be withdrawn.

Claim 34 is allowable over Turpin in view of Beretta for the same reasons given above with reference to claim 33.

Claim 35 recites a computer-accessible medium according to Claim 30, wherein the one or more instructions causing the one or more processors to convert the component values in the standardized reference color coordinate system further causes the one or more processors to calculate a minimum average component value if one of the converted component values exceed a range of [0,1].

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The Office contends that Turpin meets the limitations of claim 30, and that Beretta is being relied upon as teaching the limitations of claim 35. Specifically, the Office cites Beretta column 41, lines 16-33, which discloses using a conventional "min/max clamping" technique to enable displaying the colors properly in the monitor's gamut. The cited portions of Beretta give no further description of the "conventional min/max clamping technique", and there is no suggestion that this technique involves calculating "a minimum average

component value if one of the converted component values exceed a range of [0,1]," as claimed.

Accordingly, for these reasons, and by virtue of its dependence on claim 30, claim 35 is allowable over Turpin in view of Beretta, and the 35 U.S.C. 103(a) rejection should be withdrawn.

Claim 36 recites a computer-accessible medium according to Claim 30, wherein the one or more instructions causing the one or more processors to convert the component values in the standardized reference color coordinate system further causes the one or more processors to default to a next-closest color component value match if one of the converted component values exceed a range of [0,1].

The Office contends that Turpin meets the limitations of claim 30, and that Beretta is being relied upon as teaching the limitations of claim 36. Specifically, the Office cites Beretta column 41, lines 16-33, which discloses using a conventional "min/max clamping" technique to enable displaying the colors properly in the monitor's gamut. The cited portions of Beretta give no further description of the "conventional min/max clamping technique", and there is no suggestion that this technique involves defaulting to "a next-closest color component value match if one of the converted component values exceed a range of [0,1]," as claimed.

Accordingly, for these reasons, and by virtue of its dependence on claim 30, claim 36 is allowable over Turpin in view of Beretta, and the 35 U.S.C. 103(a) rejection should be withdrawn.

5 Claim 37 recites a computer-accessible medium according to Claim 36, wherein the next-closest color component value match is determined in accordance with a mathematical projection.

10 The Office contends that Turpin meets the limitations of claim 30, and that Beretta is being relied upon as teaching the limitations of claim 37. Specifically, the Office cites Beretta column 24, lines 37-47, which states, in part, "any uniform color space with mathematical transformations between tristimulus values and the color space coordinates may be used as a context in which to edit, modify and display colors according to the GUI of the present
15 invention." The cited portions of Beretta only indicate types of color spaces that may be edited using the described user interface. These cited portions in no way suggest determining a next-closest color component value match in accordance with a mathematical projection, as claimed.

20 Accordingly, for these reasons, and by virtue of its dependence on claims 36 and 30, claim 37 is allowable over Turpin in view of Beretta, and the 35 U.S.C. 103(a) rejection should be withdrawn.

Claim 38 recites a computer-accessible medium according to Claim 30, further comprising one or more instructions causing the one or more processors to indicate that the detected color is invalid and request another color be selected from the GUI color palette if one of the converted component values
5 exceed a range of [0,1].

The Office contends that Turpin meets the limitations of claim 30, and that Beretta is being relied upon as teaching the limitations of claim 38. Specifically, the Office cites Beretta column 41, lines 16-33, which discloses
10 using a conventional "min/max clamping" technique to enable displaying the colors properly in the monitor's gamut. The cited portion of Beretta teaches a technique for ensuring that the detected color is valid for display on monitor, which teaches away from "causing one or more processors to indicate that the detected color is invalid...if one of the converted component values exceed a
15 range of [0,1]," as claimed. If a clamping technique is applied to the detected color to enable displaying the color properly, then no detected color would be invalid, and therefore, there is no suggestion to "indicate that the detected color is invalid," as claimed.

Accordingly, for these reasons, and by virtue of its dependence on claim
20 30, claim 38 is allowable over Turpin in view of Beretta, and the 35 U.S.C. 103(a) rejection should be withdrawn.

Conclusion

Claims 30-39 are believed to be in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the present application. Should any issue remain that prevents immediate issuance of the application, the Examiner is encouraged to contact the undersigned agent to discuss the unresolved issue.

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